

Work Order ID 157777

Monday, March 20, 2017 12:54:56 PM

157777

Page 1

Item ID: 647.8510 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Insert
Start Date: 3/21/2017 Start Qty: 20.00 ***20*** Cust Item ID:
Required Date: 3/21/2017 Req'd Qty: 20.00 ***20*** Customer:
Reference: SCHEDULED/S

Approvals: Process Plan: **DAS 21** Date: **MAR 20 2017** Tooling: Date: Run Start ***NR1***
QC: **9-89** Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
647.8500	N/C

100

0.00

100

DOOSAN LATHE

Doosan

Memo

3.40

Doosan Lathe

1-Turn as per Folio FB512 & Dwg 647.8500

Folio Rev: **N/A**Dwg Rev: **N/A**

2-Deburr

20**17-03-23**

110

0.00

110

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.40

Quality Control

20**17-03-23**

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval 	
Description Work Order Deviation				Disposition					
								Completed By 	
								Lead hand / Supervisor Approval Verification 	
				QC / QA Coordinator Approval 					

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :					
Misidentified ☐	Past Due ☐						

DQA: _____ Date: _____



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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
124	QC3- Inspect Part Finish	0.00							
124						20			DAS 38 9-88
QC	Memo	0.00							
Quality Control									APR 12 2017
130	Identify as per dwg & Stock Location	0.00							
130						20			APR 13 2017
Packaging	Memo	2.00							DEC 9
Packaging	LOCATION: WA001								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.20							
Quality Control									

PA.
2017/04/17 AL

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval	
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
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Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Picklist Print

Monday, March 20, 2017 12:55:00 PM

Page 1

Work Order ID: 157777

157777

Parent Item: 647.8510

647 8510

Parent Item Name: Insert

Start Date: 3/21/2017

Required Date: 3/21/2017

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP REV:A NEW ISSUE 16-11-09 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M303R0.625		Purchased	No			100	f	12.3770	0.05	1.111111			

M303R0 625

303 Round Bar 0.625"

Location

Loc Qty

Loc Code

MAT

2.077

m135463

2.077

MAT028

10.3

m136790

10.3

1' #17-03-23

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

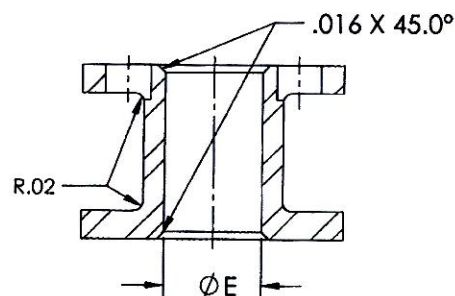
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐				
Date :	Step #:	QTY Effective :			MRB (QSI042) Approval	
Description Work Order Deviation		Disposition				
					Completed By	
					Lead hand / Supervisor Approval Verification	
					QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐						

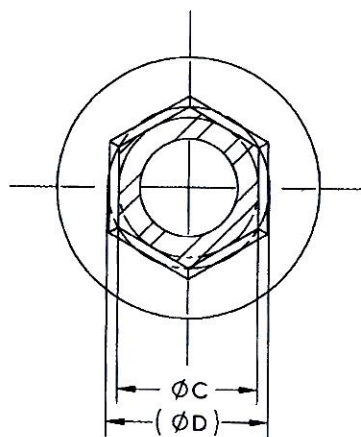
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NOTES:

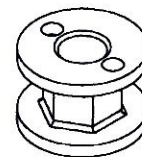
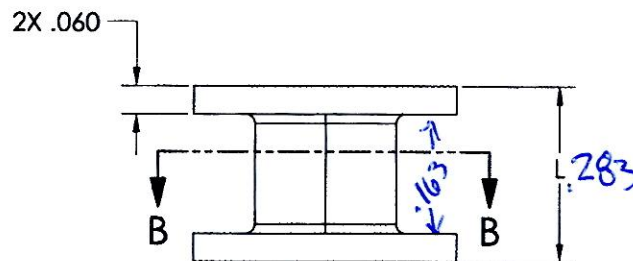
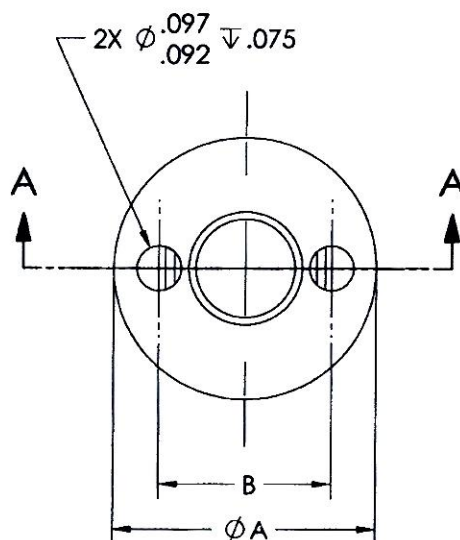
1. MATERIAL: 303 SERIES STAINLESS STEEL IAW AMS-5640 TYPE I
2. FINISH: PASSIVATE PER MIL-S-5002 TYPE 6
3. DEBURR AND BREAK ALL SHARP EDGES
4. IDENTIFY IAW MPP-120



SECTION A-A



SECTION B-B



647.8510
647.8511 SHOWN
647.8512

PART #	SIZE	ØA +.000 -.010	B	ØC	ØD	ØE	L
647.8510	3	.560	.367	.30	.35	.210	.283
647.8511	3	.560	.367	.30	.35	.210	.374
647.8512	5	.685	.487	.41	.48	.322	.283

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 157777 MLC

17 03 20

NEXT ASSY (S)		ORIGINAL DATE REVISION 101	DATE 01/10/10	APPROVED N/C
DRAWN BY J. JACOBSON		CHECKED D. BARBER		
DRAWING APPROVAL P. BRAVO		DATE 01/10/10		
CONTRACT NO.				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±.01 2 PLACE DECIMALS ±.005 ANGLES ±.2°				
APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300				
INSERT				
SIZE 8	CAGE CODE 07M26	DWG. NO. 647.8500	REV N/C	
SCALE NONE		SHEET 1 OF 1		



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO35777

Purchase Order Date 3/29/2017

PO Print Date 4/11/2017

Page Number 1 of 2

Order From :

VC-ALT01

Ship To : DART AEROSPACE LTD

APR 11 2017

GROUP ALTECH
2455 HALPERN

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

ST LAURENT, MONTREAL H4S 1N9

E-MAILED

Contact Name

Vendor Phone

514-335-3666

Ship To Contact

Ship To Phone

Ship Via:

FedEx Economy collect

Ship Acct:

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

CAD

FOB Origin

Line Nbr	Reference Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
	Line Comments		Promise Date				
	Delivery Comments						
1	158396	647.8511 insert	4/11/2017		4.00	\$4.17	\$16.67
			Yes				
			4/11/2017				
		FINISH: PASSIVATE PER MIL-S-5002 TYPE 6					
						Line Total:	\$16.67
2	157777	647.8510 insert	4/11/2017		20.00	\$4.17	\$83.33
			Yes				
			4/11/2017				
		FINISH: PASSIVATE PER MIL-S-5002 TYPE 6					

Line Total:

\$83.33

Note:

4/11/2017



2455, Halpern, Saint-Laurent, QUÉBEC, H4S 1N9
Tel.:(514)335-3666 Fax.:(514)335-3868
Internet : www.groupaltech.com

Bon de livraison / Packing Slip
et / and
Certificat de conformité / Certificate of Compliance

Bon-Livraison / Pk.Slip # : 126274-1 06/04/2017
Bon-Commande. / W.Order # : 126274
Client P.O. # : 35777
Transport :

Envoyé à / Ship to

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY
ONTARIO, CANADA K6A 1K7

Commandé par / Order by

DART AEROSPACE LTD (1427)
1270 ABERDEEN STREET
HAWKESBURY
ONTARIO, CANADA K6A 1K7

#	<u>No. Job</u> <u>No. Réf</u>	<u>NoSerie / Part Number</u> <u>Nom Produit / Product</u>	<u>Traitement</u> <u>Process</u>	<u>Poids</u> <u>Weight</u>	<u>Qté</u> <u>Qty</u>	<u>Envoyé</u> <u>Sent</u>	<u>A venir</u> <u>BO</u>
1	UNIT	647.8510 Rev.	PASSIVATION PER QQ-P-35	0.00	20	20	0
2	UNIT	647.8511 Rev.	PASSIVATION PER QQ-P-35	0.00	4	4	0

SP74-12

DAS
38
9-89

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pieces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.
We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
Our financial and legal responsibility will not be higher than the amount of invoice.